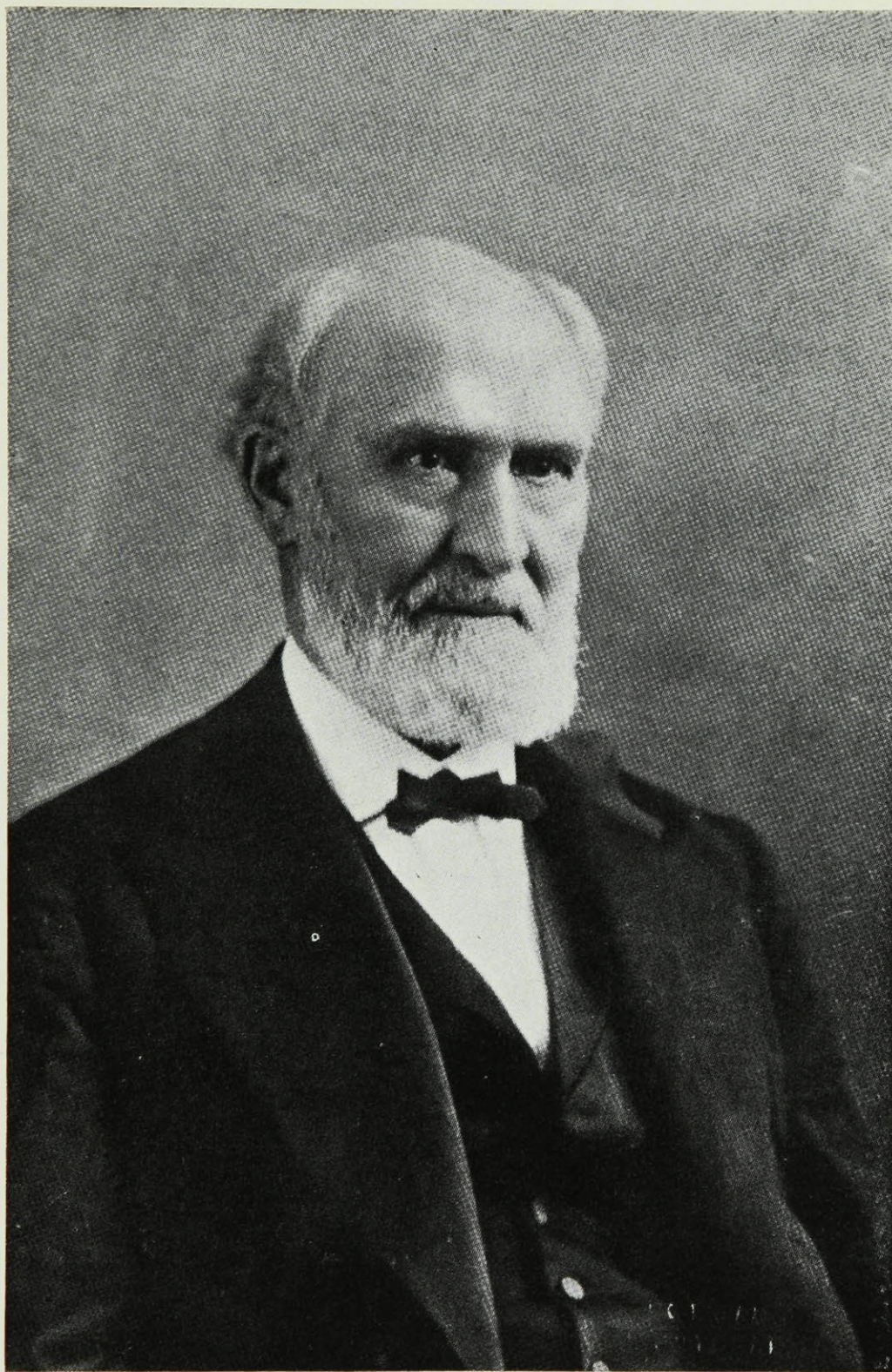

Entered according to Act of Parliament of Canada in the year one thousand nine hundred and ten, by the Students of Macdonald College, Ste. Anne de Bellevue, P. Q., in the office of the Minister of Agriculture.

CONTENTS

Frontispiece	Portrait of Sir William Macdonald	
A Message from Sir Arthur Currie		1
Editorial		2
Blue Homespun		4
Rose Latulippe		5
Workers Wanted		9
Playing the Market		16
Quis?		21
Co-education		22
The Bachelor's Club		24
On Being an Uncle		25
The Examiner's Dream		27
Art Profaned		28
Fighting Against Winter		29
Debate		32
The Importance of Being Earnest		33
Athletics		34
Agricultural Alumni		37
Faculty Items		38
Exchanges		39



SIR WILLIAM MACDONALD

A Message From Sir Arthur Currie

Founder's Day, 1930

I*T IS VERY* fitting that once in every year Macdonald College should commemorate its founder.

Sir William Macdonald was a great Canadian. In him the courage and enthusiasm of the pioneer joined with the far-seeing acumen of the experienced man of business. He saw, perhaps more clearly than any of his contemporaries, the future needs of Canada, and he saw what training was needed to fit the young men and women of our country for their great task. Because he saw all this, because he wanted to see others enjoy opportunities that he had never enjoyed, because he loved his country and his fellow men, he established and endowed these buildings and these farms, dedicated to the education of Canadian youth and to the service of Canada.

Not only the Faculty of Agriculture, the School of Household Science and the School for Teachers benefited by Sir William Macdonald's gifts. He erected the Engineering, Chemistry and Mining buildings and gave large sums for almost every branch of work at McGill.

Sir William Macdonald was a rich man, but he lived simply and without ostentation. He devoted his most earnest thought and his unceasing effort, as well as his wealth, to the cause that was nearest his heart.

Let our tribute to his memory be this,—that we strive to profit by his example, that we carry on the work for Canada so splendidly begun.

A handwritten signature in cursive script, reading "A. Currie". The signature is written in dark ink on a white background.

THE MACDONALD COLLEGE MAGAZINE

PUBLISHED BY THE STUDENTS

VOL XX

SPRING

No. 2



COLLEGE redactors are not chosen for their skill and experience in the handling of public affairs, but we will follow a well-established precedent and “rush in where angels fear to tread.” We will consider one or two aspects of College Spirit.

Until quite recently, we had been comfortable in the belief that Macdonald College was getting along very nicely, with a ubiquitous friendliness, a cheerful and loyal enthusiasm, altogether remarkable when one considers the diversity of nationality, origin, training, and aims of its students. The healthy atmosphere of the place, and the unstinted support of the students given to all college functions—athletics, dances, plays, debates, musical evenings, etc.—we had attributed to the benign influence of something which, for want of a better name, was called College Spirit.

The more strident sort of College Spirit, which was born to the south of us, and came to its blatant maturity in the colleges of Hollywood, had always seemed to us superfluous. Like disturbing a babe in arms from its degustatory bliss and making it bawl: “Good ol’ (Alma) Mammy! Rah! Rah! Rah!” But there are many who believe otherwise, and, dissatisfied with our present state, find time (since they themselves are doing nothing) to wish for more tangible ebullitions of filial regard.

The advantages to be gained are not obvious. We humbly bring to your notice the fact that, as against the practice of previous years, there was, last year, only one “pep rally” (declared farcical by connoisseurs) and this year there have been none. The result should have been disaster; but no college activity suffered a de-

cline and, in athletics — the only activity which lends itself to exact comparison—there was a marked improvement in results last year and high hopes are held for this. But the carpers are in high places, as well as here with us upon the ground. So we sadly abandon our old position. We now advocate a wholesome hatred of all outsiders, and pray earnestly for good rollicking, venomous pep in our college teams. And may the price of throat-tablets, rattles and knuckle-dusters stay within our means.



With thoughts of College Spirit still with us, we think that this would be as good a place as any to comment upon the almost total absence of the married Staff from the last Formal Dance.

In the opinion of the more responsible students this was regrettable,—the only flaw in an otherwise unqualified success. We, ourselves, enjoyed the dance, and sympathise with the dance committee in their failure to satisfy more exacting standards. May their successors be less unfortunate.



We have been asked to convey the thanks of the students to Mrs. Walter M. Stewart for her recent generous gifts to College activities. Mr. and Mrs. Stewart have earned our gratitude by their liberal support of various phases of student life for a number of years.



The literature of our province of Quebec, although comparatively young, is rich in legends and folklore: some borrowed, but mostly native. Of poets, also, Quebec has a proud array, and we print in this number a verse by one of our truest poets and the history of a fight in which, we are happy to say, the devil was a bad loser.

Blue Homespun

BEYOND the doorway of the tiny room
The yellow autumn sunshine died away
Into the shadows of the waning day;
Wrapped in the twilight stood old Marie's loom,
Above the loom the Holy Virgin hung,
Blue-robed and smiling down; and old Marie,
After the evening angelus had rung,
Arose and touched the picture lovingly
With rough brown hand, then turned and looked once more
Upon her sky-blue cloth, and closed the door.
A shapeless mass of timbers in the gloom;
But one small window cast a golden ray
Upon a bench where sky-blue homespun lay,
Lighting the dusk-like sheaves of chicory bloom.

—Frank Oliver Call.



Rose Latulippe

An old-time legend of Mardi-Gras in French Canada.

IN TIMES bygone, there lived a man named Latulippe, the respected father of a handsome and only child; and truly, Rose Latulippe was a pretty brunette, rather frisky, not to say wild. She had a lover named Gabriel Lepard, whom she prized as the pupil of her eye. Notwithstanding, when another young fellow made up to her, she would drive her friend wild with her coquetry. She was passionately fond of dancing. On one occasion, it was like this very day, Shrove-Tuesday, there were upwards of fifty guests at Latulippe's house, and Rose, as great a coquette as ever, contrary however to her custom behaved remarkably well to her betrothed. There was nothing very surprising in this; they were to be married the Easter following. It might have been 11 p.m., when all at once in the midst of a cotillion, a vehicle stopped at the door. Several rushed to the windows and striking them with their fists to free the panes of the snow which adhered to them from outside, they looked forth to see who was the new comer, for it was very stormy. "By Jove!" some one cried out, "it is a swell! What a splendid black horse he drives; what fire in his eyes! Good gracious! one would imagine that he will run over the house." While the inmates were exchanging these remarks, the new comer had entered, and politely asked permission to join in the dance for a few moments.

"This would be doing us too much honour," replied old Latulippe; "take off your overcoat, sir, whilst I have your horse put in the stable." This last request the strange gentleman absolutely opposed, alleging that he would only spend half an hour there, as he was pressed for time. He, however, removed a magnificent raccoon fur coat and then appeared in a suit of black velvet, richly braided. He did not however remove his gloves, and asked as a favour to be allowed to keep on his fur cup, as he said he was suffering from a cold.

"Monsieur will take a glass of brandy," said Latulippe, handing him a glass. The unknown did so, but a horrible contortion convulsed his face when he swallowed the liquor; Latulippe being short of bottles, had emptied out the contents of the one which held the holy water, and replenished it with brandy.

The unknown was a handsome fellow, though his complexion was dark, and there was something sinister in his looks. Advancing towards Rose, he took her hand. "My pretty lass," said he, "I hope you will dance with me to-night, and that more than once."

"Certainly," timidly replied Rose, while she glanced towards poor Lepard, who bit his lips until they bled. The handsome stranger never quitted Rose during the remainder of the evening; the unfortunate Gabriel, seated in a corner, watched what was going on in a silent mood.

In a small apartment opening on the ball room, one might, at the moment, have seen an aged and pious woman, seated on a chest at the foot of a bed praying fervently. In one hand she held her beads (rosary) with the other she motioned to Rose that she wished to say something.

"Listen," said she; "it is very wrong for you, Rose, to leave Gabriel your betrothed, for this gentleman. There is something I do not like about the stranger, for each time I pronounced the holy names of Jesus and Mary, his eyes turned towards me with anger. Just see what savage glances he has just darted towards us."

"Rattle on your beads, old dame, and leave us young folks enjoy a little fun!" replied Rose.

"What did that old fool say to you?" inquired the unknown from Rose.

"Oh! nothing in particular; you know old fogies like to croak and preach to the young," she replied.

Twelve o'clock struck, and the master of the house was desirous of ending the dance, observing that it was ill-becoming to dance on Ash-Wednesday.

"Another little dance?" said the stranger.

"Oh! yes, dear papa," said Rose, and the dance went on.

"You have been mine all evening, my fair friend," said the stranger, "why should you not be mine for ever?"

"Now, don't say that," replied Rose, "it is not right for a gentleman like you to make fun of a simple peasant girl like me."

"I vow," said the unknown, "I never was more serious; only say yes, and nothing can ever separate us."

"But sir. . . ." and Rose cast a glance towards the unfortunate Lepard.

"I understand," said the stranger, with feigned pride, "you love him."

"Well, yes, I love him, or rather I *loved* him once. But fine gentlemen like you are such humbugs, that I cannot believe what you now say," meekly retorted Rose.

"What! my pretty Rose, could you think me base enough to deceive you; I swear by all that is holy, by"

"Oh! no, do not swear! I believe what you say," replied the poor girl; "my father, however, may refuse his consent."

"Your father," said the stranger with a sneer; "only say you will be mine, and I will arrange the rest."

"Well, yes," she replied.

"Give me your hand to seal our plight." The unfortunate Rose extended her hand, which however she instantly withdrew, uttering a low but piercing groan of anguish, for she had felt the point of some sharp instrument in her flesh. She grew ashy pale, and feigning to be ill, she stopped dancing. At that moment two young fellows entered the house with an alarmed look, and calling aside Latulippe, they said to him: "We have just been outside looking at the strange gentleman's horse; would you believe that all the snow is melted round where he stands, and that his feet rest actually on the soil?" Latulippe went to see for himself, and finding matters as stated, seemed the more terrified as he had previously witnessed the paleness of his daughter, who had half confessed what had

taken place between her and the stranger. Terror soon spread among the guests; whispers went around and the entreaties of old Latulippe alone prevented the company from withdrawing. The unknown seemed to view with indifference what was going on, and continuing his attentions to Rose, he offered her a magnificent gold necklace, set with pearls. "Remove those glass beads you wear, my pretty friend," said he, "and accept for my sake this necklace of real pearls." But to the glass beads on Rose's neck was attached a little cross, and the poor girl did not care about exchanging it.

A very different scene was at that time taking place at the *presbytère* (parish priest's residence). The old parish priest kneeling since nine o'clock that evening had unceasingly prayed to God to forgive all the sins which his parishioners would commit on that sinful night of Shrove-Tuesday.

The holy man had fallen asleep while praying, and had been in a deep slumber for more than an hour when, starting up, he ran to his man-servant "quick, Ambrose," said he, "lose not a minute; harness my mare! In the name of God be quick! I will make you a present of one, of two, of three months' wages, if you will hurry!"

"What is the matter, *Monsieur le Curé?*" cried out Ambrose, who knew how zealous his master was, "is anyone in danger of death?"

"In danger of death?" replied the priest; "more than that, my good Ambrose! there is a soul in danger of eternal damnation. Be quick! be quick!"

Five minutes after and the priest was galloping towards Latulippe's house, in spite of the storm; Sainte Rose was lending her aid. It was high time that the minister of religion did arrive; the strange gentleman, by pulling at the beads Rose wore, had broken the thread which held them, and was preparing to seize hold of her, but the priest was too quick, and passing his stole round the girl's neck, he drew her towards him and then in a voice like thunder: "What art thou, arch-fiend, doing amongst Christians?" said he. The guests had all fallen on their knees on witnessing this awful scene, some shedding tears at seeing their venerable pastor, generally so frail and so timid, become at once so courageous, in the presence of the enemy of God and of man. "I do not," replied Lucifer, glaring with fiery eyeballs, "recognise as Christians those who disgrace their faith by dancing and carousing on days devoted to penance by your damnable precepts; this young girl has chosen to be mine,—with the blood which flowed from her hand did she seal the compact which binds her to me for ever."

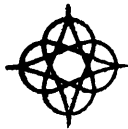
"Hence, Satan, hence!" roared the priest, striking him on the face with his stole and repeating some Latin words which none present understood. The devil immediately vanished amidst an awful clatter, filling at the same time the house with such an odour of brimstone as nearly suffocated the inmates. The good man, retaining close to his side Rose, who was speechless, offered a prayer, in which the terrified guests all joined.

"Where is he? where is he?" exclaimed the young girl, recovering herself. "He is gone!" all replied. "Holy father, do not leave

me," rejoined Rose!" You alone can protect me! I will take the veil in a convent!"

"Be it so, poor repentant lamb, who now returns to the fold. Be it so, if you are serious; I can understand your feelings after the events of this day."

Five years after this and the melancholy tolling of the bell of the Convent of ———— had announced that a young nun had rejoined in heaven her celestial spouse. A large concourse of people attended the funeral. Amongst the crowd which curiosity had attracted, three persons in deep sorrow might be noticed: an aged priest, kneeling in the sanctuary, was praying fervently; an old man in the nave was shedding tears for the loss of an only child, and a young man in deep mourning was grieving over the death of his first and only love, his betrothed—her name was Rose Latulippe!



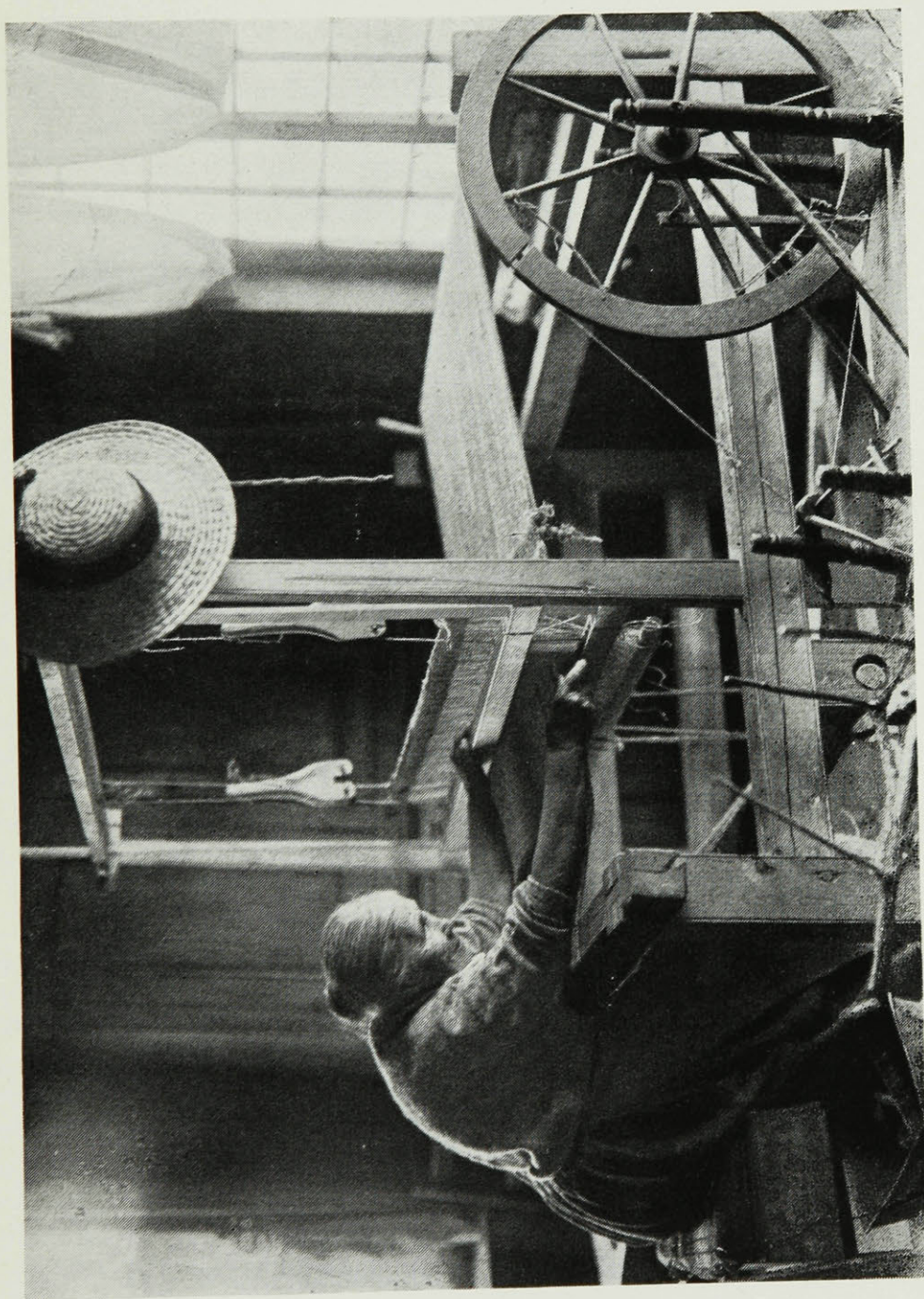
The Making of Eve

WHEN GOD decided to create Eve, he considered from what part of Adam's body he should fashion her.

He said: "I will not fashion her from his head lest she be too vain. I will not fashion her from his eyes lest she be eager to see all things. I will not fashion her from his ears lest she be an eavesdropper. I will not fashion her from his mouth lest she be a gossip. I will not fashion her from his heart lest she be envious. I will not fashion her from his hands lest she grasp things that do not belong to her. I will not fashion her from his feet lest she be a gadabout.

"I will fashion her from a hidden part of his body, a part which will be covered even though he stand naked." And as each nerve and tissue he created, God said, "Be thou a modest wife, an exemplary woman."

Nevertheless, God's plans were thwarted. Woman is proud; she is eager to see all and know all; she has nine measures of talk; she is jealous; she craves for things that are not hers; and she is a gadabout. *The Talmud*. (Gross).



OLD MARIE'S LOOM.

Workers Wanted

The following short articles, written by members of the Staff, are of general significance but should be particularly interesting to graduates and others who have chosen their line of work; and to those who have yet to make the fateful decision.

In a previous issue the voice of the Plant Pathology Department was heard, and in our next number we hope to print similar articles from the more definitely agricultural departments.

The Scope And Present Status of Applied Entomology

BY DR. W. H. BRITTAIN

INSECTS FORM but a single Class of the Animal Kingdom, and entomology is only a subdivision of the science of Zoology, even though, in more numbers, insects exceed all other animals. The entomologist, therefore, unlike the student of birds or mammals, can rarely hope to master more than a small fragment of his group—a single family or, at most, an Order—within his allotted span. Indeed, the scarcity of trained workers in insect classification is a serious handicap to the development of other branches of entomological science.

Ever since the dawn of history insect depredations have been the cause of loss and suffering to the cultivator in all parts of the world, and today—insect pests are recognized as being among the most important limiting factors to profitable crop production. Indeed, no product of human activity, from lead pipes to fur coats, is immune from their ravages. The role of many species in annoying or injuring man and his domestic animals and in transmitting animal diseases is well known, while the list of plant diseases of which insects are the known vectors is a rapidly growing one. On the credit side, we owe the development of many economic fruits and seeds to the activities of insect pollinators. Other species, such as the lac insect, the cochineal insect, the silk worm and the honey bee, are the basis of important industries. The biological control of certain injurious plant species, such as the lantana in Hawaii and some species of prickly pear in Australia, has been accomplished through utilizing their insect enemies. The successful control of a number of introduced insect pests by means of their parasites and predators is one of the most brilliant triumphs of applied biology.

The practice of economic entomology is comparable to that of medicine, with insects taking the place of pathogenic microorganisms and hundreds of plant species replacing the single animal species with which the physician has to deal. The pharmacopoea is replaced by a large and growing list of chemicals, the physical, chemical and insecticidal nature of which demands the efforts of

many trained investigators. Hence, the applied entomologist requires a similar training to that of the physician.

"The field of applied entomology is that part of ecology over which the ecology of man and insects is coincident" and the activities of a brilliant school of ecologists seems likely to furnish applied entomology with new weapons, which may well be increasingly used in our future warfare against injurious insects. Along mechanical lines great strides are being made. Super-sprayers and dusters are more numerous today than primitive hand outfits were twenty years ago, while even the aeroplane has come into commercial use over wide areas. The applied entomologist must also be prepared to give careful study to the economics of the production of the crop he desires to protect, as well as to the psychology of those producing it, for his task is incomplete until his discoveries and recommendations are translated into profitable practice.

A few relevant facts may serve to indicate the present status of applied entomology: Official entomologists are now found in all civilized countries. Within the British Empire they are over double the number of any other group of scientific workers except chemists. In Canada, the federal government alone employs a staff of approximately 140 workers, with 16 research laboratories and 10 plant inspection stations, involving an annual expenditure of close upon \$600,000, while the U.S. federal service has about 560 permanent employees and an annual appropriation of over \$2,000,000 for research work alone, aside from such extraordinary grants as the \$10,000,000 corn borer campaign grant or the reported \$15,000,000 grant for the suppression of the Mediterranean fruit fly.

In our universities separate Departments of Entomology sometimes overshadow Departments of Zoology and, of the total number of Ph.D. theses in the general field of zoology published in the United States, half or over half, in certain years, deal with purely entomological subjects. Finally the extent of public interest in the subject may be indicated by the fact that, of the total number of news items appearing in the press relative to scientific subjects, entomological topics are only exceeded by those dealing with anthropology.

Opportunities in Agriculture for Physicists

BY PROFESSOR W. C. QUAYLE

IN ATTEMPTING to discuss the value of a specialized training in Physics to a worker in Agricultural Science it will first be necessary to examine what is implied in the term Agricultural Science. The dictionary states that Agriculture means "the cultivation of the soil", so presumably the Science of Agriculture (apart from the practice of Agriculture which is defined as Husbandry) is the expression of the phenomena connected with land cultivation in terms of the Physical and Biological Sciences.

The former of these groups of sciences is divided into two sections, Physics and Chemistry, but it must be born in mind that this division is a purely arbitrary one of convenience and in nowise implies a logical distinction. It is impossible to define where this boundary is to be drawn and at the present time it is difficult to detect its existence.

The progress of a science is measured by the extent to which it can be expressed in terms of Physics and Mathematics.

It thus appears strange that the study of Physics and Mathematics until quite recently has been neglected by Agricultural Scientists. The reasons are discovered by examining the history of the development of Agricultural Science. The first growth was due to the labour of chemists and in the early days of Agricultural Colleges the average standard of attainment of the students was such that the intrinsic difficulties of Physics and Mathematics compelled their almost total omission from the curriculum. This resulted in an ignorance of the more fundamental laws of nature and the tendency to be easily satisfied with a chemical explanation which is so noticeable amongst Agricultural workers today. Great changes are taking place, however, and it is being realised that there lies a vast field for investigation of the Physics of growth processes, and of the transformation of radiant energy in the soil.

Another fruitful line of investigation is the correlation of the Physics of the Air with Agricultural Processes or as it is now called, Agricultural Meteorology. The importance of this has been stressed quite recently by the American Association for the Advancement of Science and also at the Conference of Empire Meteorologists held in London last fall.

There is not the slightest doubt that there will be a steadily increasing demand in the future for men who have specialized in Physics and Mathematics. Many of those at present occupying influential positions in the administration of Agricultural Funds have been trained solely in the practice of agriculture and have therefore very little appreciation of either the scientific problems involved or the training required by the workers. As these are replaced in the course of time by men of wider scientific training, the development will be more rapid.

Up to the present it has not been necessary for Physicists to band themselves into a professional body to keep out untrained competitors as the Chemists for example have had to do, consequently there is no Society of Professional Physicists in Canada.

This absence of professional organization has led some administrators to the curious conclusion that there is no such thing as a professional physicist.

It is more than possible that as soon as the National Research Institute at Ottawa gets into its stride there will be a demand for Agricultural Physicists to carry on Agricultural Research Work.

A student who takes the trouble to qualify himself in Physics and sufficient Mathematics to understand the elementary theory of Statistics will be well prepared for the future development of Agricultural Science in its Physical aspect.

A minor but important advantage of such a training is that it opens up wide fields outside of agriculture.

Opportunities for Agricultural Chemists

BY DR. J. F. SNELL.

An enumeration of the positions to which our graduates who have specialized in Chemistry have received appointment upon, or shortly after, graduation, together with an account of their subsequent progress, may serve to give some idea of the kind of employment to which the B.S.A. of this particular type may look forward. The record for Chemistry (and Bacteriology and Chemistry) is as follows:

Class of 1922

- C. J. Watson**—Assistant in Chemistry Division, Dominion Experimental Farms. Has taken Ph.D. in Cornell University and received advancement in his Division.
- F. B. Chauvin**—studied law and is practising in Montreal. Does not regret having taken course in Agriculture.

Class of 1923

- R. R. McKibbin**—Industrial Fellowship, University of Maryland—took Ph.D. there, was appointed Assistant Professor of Soils and had good prospect of rapid advancement to head of the Department. Now Lecturer, Macdonald College, and Specialist in Soils Research.
- L. O. Rolleston**—Analyst, Abitibi Power and Paper Company, Iroquois Falls, Ont. Advanced to Chief Chemist of the analytical laboratory. Now Research Chemist, Tuinucu Sugar Company, Tuinucu, Cuba.
- J. V. Stevens**—Analyst, Abitibi Power and Paper Company. Now in charge of the analytical laboratory.

Class of 1924

- J. A. McGargle**—Temporary non-chemical employment in summer with an insurance company. Chemist with the J. T. Donald Company, Consulting and Analytical Chemists, Montreal. Now with Busfield McLeod Limited, Toronto, in water purification projects.
- C. R. Mitchell**—Assistant Chemist, Canada Starch Company, Cardinal, Ont. Later, graduate student at Macdonald College, having summer employment in potato disease work in the Dominion Department of Agriculture. After receiving degree of M.Sc., Assistant Chemist, Crosse and Blackwell, Ltd., Toronto. Now Assistant Chemist in Forest Products Laboratories, Montreal.

Class of 1926

- W. B. Hamilton**, Assistant in Bacteriology, Massachusetts Agricultural College, Amherst, Mass., later graduate student,

Macdonald College, after receiving the degree of M.Sc., Bacteriologist in the State Health Bureau, University of Kentucky, Lexington, Ky.

S. W. Hetherington—Instructor of Chemistry, Rhode Island State College, Kingston, R.I.

Class of 1928

E. T. Bynoe—Assistant in Bacteriology, Macdonald College.

V. C. Dawson—non-chemical work with an insurance company, then assistant in the analytical laboratory of the Abitibi Power and Paper Company, Iroquois Falls, Ont. Now in the Colonial Service.

A. S. McFarlane—Assistant in Animal Pathology, Macdonald College. Now in research laboratory of the Department of Marine and Fisheries, Halifax, N.S.

Class of 1929

R. K. Holcomb—Summer employment in Chemistry Division, Experimental Farms System, Ottawa. Now Demonstrator in Chemistry, McGill University.

Of the B.S.A.'s from other universities who have taken graduate courses in Chemistry in Macdonald College, Lionel Beaudet, M.Sc., is Assistant Chemist in the Provincial Laboratory, St. Hyacinthe; S. C. Robison, M.Sc., is Plant Research Chemist of the Continental Can Company, Syracuse, N.Y.; Luc Duval is Canadian Representative of the American Agricultural Chemical Company; W. A. DeLong, M.Sc., Ph.D. (Minn.) is Assistant and Professor of Chemistry in Acadia University, Wolfville, N.S.; J. A. Leduc, M.Sc., is Professor of Chemistry in the Oka Agricultural Institute, La Trappe; R. O. Brooke, M.Sc., was for some years on the staff of the Texas Agricultural Experiment Station and is now Assistant in Physiological Chemistry in Yale University, New Haven, Conn.; and E. A. Carleton, M.Sc., who came to us with the degree of B.Sc. from the Rhode Island State College, is Chief Chemist of the Kentucky Rock Asphalt Company, Bowling Green, Ky. Our other graduate students have come from the Arts Faculties and, though they also hold good positions, their records are not apposite to the present demonstration that ever since we began to give special chemical training to students of agriculture, there has been a steady demand for men with their peculiar type of training, a demand sufficient to absorb our limited output as well as that of sister institutions. In the past our men have been somewhat handicapped by the inadequate foundation in Mathematics and Physics, which the curriculum of the College provided, but those who are now undergoing training will be, we hope, as well equipped in these respects as their fellowstudents of the Faculties of Arts, Medicine and Engineering. Of course there is and will always be a limit to the demand for agricultural chemists, but at present the outlook is not at all discouraging. The Dominion Department of Agriculture employs chemists, not only in the Experimental Farms System but also in the Seed Branch, the Department of Health employs food chemists and bacteriologists and the great forward movement in industrial research promises to lead to the employment of an increasing number of chemists in industry, not only in research but also in control work. Agricultural graduates will have special qualifications for some of these positions.

The Scope of Parasitology

BY DR. E. M. DUPORTE

The term *parasitology*, as used in human and veterinary medicine, denotes, in its broadest sense, the study of all organisms which are parasites of man and other mammals. With but few exceptions these belong to five great groups of organisms, namely: (1) The bacteria which are unicellular plants; (2) the Protozoa (unicellular animals); (3) Platyhelminthes or flat worms; (4) Nemathelminthes or thread worms; (5) The Arthropoda, including ticks, mites and insects.

The heterogeneity of the parasite population results in a diversity in technique, which in its turn resolves the whole subject into four natural divisions.

Bacteriology with its distinctive technique and content forms a distinct science and is not included in the formal definition of parasitology which concerns itself only with parasites of animal origin.

Medical protozoology is concerned with the study of the causal organisms of such important human and animal diseases as malaria, amoebic dysentery, sleeping sickness, Texas fever, coccidiosis, etc. In many respects the technique of this science is very similar to that of bacteriology.

The flatworms and thread-worms, which cause such diseases as hook-worm disease, filariasis, trichinosis, parasitic pneumonias, liver rot of sheep, gid, etc., although belonging to two distinct phyla, form, for the parasitologist, a single natural group, the study of which is known as medical helminthology.

The arthropods are of importance in medicine not so much for the harm they themselves do, though a few forms are dangerous parasites, but because many species are concerned in the spread and transmission of other dangerous parasites. Such are the mosquitoes which transmit malaria, yellow fever, filaria; the housefly which transmits typhoid, cholera, dysentery; ticks which transmit relapsing fevers, Rocky Mountain fever, Texas fever; and many other forms which spread other dangerous diseases of man and animals. Facts relating to the biology, habits and control of these arthropods form the content of medical entomology.

Parasitology at Macdonald College

For several years the parasitic phyla have been specially emphasized in the course in Invertebrate Zoology, but this year for the first time we are giving formal courses in parasitology available for election as majors. The courses now offered include (1) A general course open to all students, (2) A more advanced course supplementary to this, (3) A course in technique, (4) A seminar on parasitological topics, (5) A special project. To these are added the cognate courses in insect morphology and ecology.

We have also formulated a research program on parasites of domestic animals, and have begun work on certain poultry parasites in collaboration with the departments of animal pathology and poultry husbandry. We hope to extend our researches to the parasites of certain other domestic animals in the near future.

Opportunities for the Parasitologist

Any of the three branches enumerated above may well constitute the life work of a specialist in parasitology.

The openings for parasitologists in Canada are rather limited at present, but the marked increase of interest in parasitology, due to the losses among domestic and fur-bearing animals, promises an early improvement in the situation. Already Ontario has appointed a provincial zoologist in charge of work in veterinary parasitology. The Entomological Branch provides a limited number of openings for workers in medical entomology. The probable development of a research program in veterinary parasitology will also provide an outlet for parasitologists, particularly helminthologists. Teaching positions in zoology or in entomology will usually carry with them leisure for research, which will enable the holder to do original work along his chosen line.

In the Colonial Service there are numerous positions in all fields of parasitology.

In the United States the situation is much better than in Canada and indicates the probable direction along which this country may develop. Teaching and research positions in the medical and veterinary schools are numerous. Formerly these were held by men with medical degrees, but there is a growing tendency to appoint non-medical specialists in parasitology. In addition there are openings for specialists in protozoology or helminthology in many university departments of zoology. Private research foundations often employ trained parasitologists. The work done by the Rockefeller Institute for Medical Research on hookworm and yellow fever, for example, called for the co-operation of medical men, parasitologists and medical entomologists. The Federal Government also employs parasitologists and medical entomologists in the Public Health Service, the Bureau of Animal Industry and the Bureau of Entomology. Some of the States also employ parasitologists.

It will be seen then that while in Canada the openings for parasitologists are not at present very numerous the situation is likely to improve. In the meantime there are many opportunities in the British Colonies and the United States for trained students.



Playing the Market

By S. R. N. Hodgins

The Chattering Ticker Takes; and, Having Taken, Ticks On.

TO the average person of enterprise and easy conscience there comes, sooner or later, a time when, finding himself one jump ahead of the tax collector and the feed merchant, he looks about him for a method of making his savings work for him—a thing that they do not do if kept in a sock at home. Up to a few years ago the usual thing was to lend this money out to one's neighbors on a mortgage plan, which, of course, led to much unpleasantness in the way of driving the harassed debtors forth into the cold winter night when they failed to make their payments.

The war, however, changed the attitude of the average man towards investments. It became patriotic to buy Victory Bonds. Bonds, mark you! The things that had previously been pictured as protruding from the pockets of the prosperous-looking gents in silk hats and behind dollar cigars that cartoonists labelled "Trusts" in the Liberal papers. This proved to be but the thin edge of the wedge. What could be more natural than one's progress from bonds to stocks? As the old temperance song has it, "The boy who chews tobacco will also take drink."

Various reasons have been given for the tremendous swing of public interest to common stocks—the fact that they gave the small investor a chance to share in the prosperity of the country, the fact that large insurance houses have led the way, the fact that "crap shooting," poker playing and betting on the ponies are regarded as sinful, while even a church elder may with impunity take a flier "on the market." But, whatever the reason, it is certain that one could scarcely heave a half brick in any direction during the past three or four years without maiming a stockholder. Nor was this true of urban districts only: even a U.F.O. orator must frequently have hesitated of late before damning the plots and machinations of St. James Street as he reflected that amongst his hearers were probably a fair number of amateur financiers allied to the Holt, the Timmins or other interests.

Not all stock buyers are gamblers. Many, many thousands of persons buy such securities for investment pure and simple, thus helping make possible the businesses that supply us with electric light, cars, radios, farm implements, and that distribute our milk in the city, mill our wheat, turn our pigs into bacon for the breakfast tables at home and abroad. In general, the man who buys stocks with an eye to interest yield, and who pays for it outright, is an investor; while the man who buys with an eye to possible rises in the price of the stock itself, and who usually "margins" his account for greater possible gains, is a speculator, or a player of the market. It is of the latter that I write in this article.

But what do you mean by the term "margin?" I hear someone ask. Fortunate someone!—to be ignorant of the meaning of the term during a period such as that through which we have just passed!



JUNIOR B.H.S.

The term "margin" is made up of the initial letters of certain words in the phrase "M-ethod A-dapted to R-eaching G-oal I-n N-o Time," though in a falling market the G stands for "gaol" more often than for "goal."

The scheme is this: "You have \$1,000 to invest, or gamble, as the case may be. Consolidated Whiffletrees are selling at 33½, and you have a tip that they're going to 75. With your \$1,000 you could buy approximately 30 shares outright—but the broker allows you to buy on a 33 per cent. margin, carrying the balance himself at a cost to you of but seven per cent. interest. Thus, with your \$1,000, you buy, not 30 shares, but 90. If the stock rises 10 points you make, not \$300 profit, but \$900.

But when the market falls rapidly, as it did during the last week of October of last year, you find yourself in this predicament: No matter what the value of the stock, you owe the broker \$2,000 on it, and he's going to see that his interest is not jeopardized. The stock drops to 25—or a total worth of \$2,250. This is too close to the margin to suit the broker, so he calls on you "to cover." You scrape up an additional \$250 by selling the car, robbing the poor box and hocking the family silverware, and toss it in, reducing your unpaid margin to \$1,750. The stock continues to drop—to 22, to 20. At the latter figure the broker, finding that you can't "cover" again, sells you out, the sale netting \$1,800, less charges which take up the other \$50.

You have now withdrawn from the market, via the "margin" route, and all you have to do is to think up some plausible explanation to offer the wife on the disappearance of the silverware.

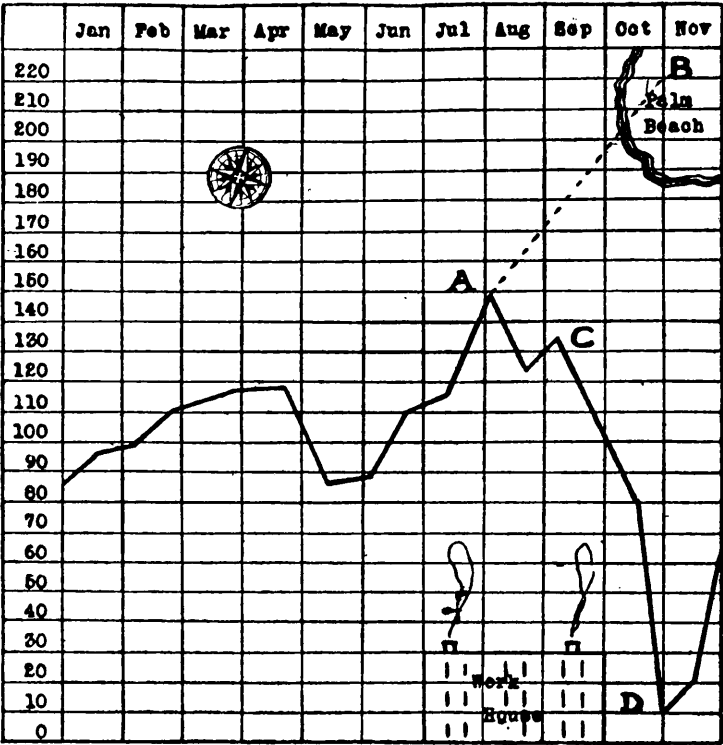
From this experience we derive our first lesson in finance: Never buy on margin.

Interestingly enough, the above was not the first lesson I learned. Like several of my friends, I made my debut in finance, not as a player of the market, but as a private investor—and it was my lack of success here that drove me to the market, where one at least had a gamble for one's money.

I had just got to the place where the manager of the local bank was beginning to nod to me on the street, when a house-to-house salesman, clothed in the garb of Opportunity, offered to let me in "on the ground floor" of a new and promising stock flotation. "If you had got in on the ground floor when the Ford business was at the stage that the Dyrob Steel Company is today (for this was the stock he peddled), you would now be rich beyond the dreams of avarice," he said, as he filled out my application for shares. And, though I had no objection to being rich beyond the dreams of avarice, I looked mainly to the seven per cent. promised on the preferred shares, and the possibilities of dividends on the common shares that were thrown in for good measure.

I got in on the ground floor, all right—but shortly found myself in the cellar. The company failed before it paid even one dividend and, like matrimony, automobile accidents and the Ku Klux Klan, I found this stock easier to get into than to get out of. In fact, I still have some nicely engraved shares of Dyrob Steel, which I shall be glad to send to any collector who cares to forward 10 cents to cover mailing charges.

A speculator friend of mine similarly started out as an investor, buying from a salesman (for interest yields) some shares of Cent-A-Shine stock to be used in promoting a shoe-shining business. Today, with his strong box stuffed with these certificates, he walks about with unblacked boots. And, in fact, the country is full of men who still treasure bundles of useless certificates of stocks in mines, oil wells and industrial companies that represent their entrance on the ground floor of investments, not speculations, and that represent nothing more.



Graph showing typical action of stock in which I've invested. A is point at which I step into market. B is height to which, according to brokers, stock will advance by November 1st. C is point at which I should have sold. D is point at which I finally sell - saving, by great good luck, my B.V.D's, and nothing else.

So, although this has nothing to do, strictly speaking, with "playing the market," let me set down another bit of advice, a bit which might perhaps be put even before our first lesson, as given above: Never buy stock that is not on the market.

The years passed, and again I found myself with a modest savings account. This time I called on a stock broker. Here one could deal in securities that had nothing to do with the "ground floor," but that might be unloaded if need be. I bought Shawinigan on a rising market. Unfortunately, I had not sufficient capital to enable me to buy much of this, so the broker showed me how, through the margin scheme, I could make sure of getting a nice little block at current prices, paying off the balance while the stock still soared. I was still an investor, you see.

Then the stock shot up to a point where I had doubled my investment—so, forgetting yields, and thinking only of capital gains, I sold. I bought Smelters—not knowing whether they were mines or fish, and again, by margining my account, I doubled my

money. Profits, profits, profits! Why hadn't I thought of this before? I asked myself. Then I got a tip "on a good thing."

It was from the aforesaid manager of the local branch bank, and it was to buy Tram Power (for which you will now look in vain) at 21. He had it from someone in head office who knew someone who knew someone who knew the president of the company—and the inside "dope" was that Tram Power would go to 40 within six weeks. Surely, I thought, this banker, who has so often refused me loans on the ground of insufficient security, will have made sure of the assets behind one of his own investments, for he was putting several thousands into it. In less than six weeks I was forced out at 14—losing all I had made in my previous plays—and within two months the stock had touched zero.

I have since found that tips are usually given at the wrong time. Last spring, when Montreal Power was selling at 100, brokers saw no reason for expecting much movement in it. When it reached 175, they issued letters advising its immediate purchase. It has since seen 125. Again, I came across, while lighting the furnace fire a few days ago, a copy of a year-old newspaper in which a well known brokerage house said, in large, black type, "Regardless of day-to-day fluctuations, we recommend the accumulation of Malartic at current prices." These, according to the quotations for that day, ran around \$1.60. As I write, Malartic is quoted at 4 cents.

Whence we derive another lesson: Never buy on a tip.

But why, asks someone, should one dabble in stocks at all? Read some of the market letters issued by brokerage houses, and see. "*If*," says one of these, "one had invested \$8,500 in Montreal Power 21 years ago, his investment would now be worth \$167,000." Another reads, "*If* one had bought 100 shares of Shawinigan in 1911, at 110, and had taken up all his 'rights' (to buy new stock at less than the market price, his total investment of \$38,000 would now be worth \$110,000." And yet, another, "*If* one had bought 100 shares of Imperial Oil in 1914, at 125 (total \$12,500), and had taken up all his "rights" offered since, one would have invested, up to the present time, \$38,000, have received in dividends \$61,000, and now own 19,712 shares (the result of a series of splits, of rights, etc.) worth about \$600,000."

So why farm? Why not put the price of a farm into one of these and live on the interest?

The catch, of course, is that *If* one had put \$12,000, or \$120,000, or \$1,200,000 or any other amount in any number of unnamed stocks 20 years ago, one would have today whatever he saved since he lost his original investment.

However, we can learn a lesson from these letters: Always buy Montreal Power 21 years ago, Shawinigan in 1911, and Imperial Oil in 1914.

One should not allow oneself to be swept away by these figures on Imperial Oil and Montreal Power. They are authentic, all right, but it is not the good fortune of every player to stumble on such winners.

Personally, I have been in and out of the market for some years now—but mostly out money. And this seems to be the experi-

ence of most of my friends who play the market. Yet I do not subscribe to the old-fashioned doctrine that the market is run for the purpose of shearing lambs. I have seen Bulls on the market (the chaps who boost stock prices) and Bears (the fellows who sell "short")—but I have yet to see the player who admits to being a lamb.

Some of us are unfortunate, that's all. My reverses have usually come because I have made it a principle to buy stocks when they are high and sell them when they are low. And if, today, I sit, like Marius amongst the ruins of Carthage, bleakly examining the wreckage left of my fortune by the panic of "Black Tuesday," October 28, and wondering whether "The Farmer's Advocate" will pay me enough for this article to enable me to buy the customary sweets for my family for Christmas, I have sufficient optimism left to believe that I shall yet get back my own—with interest.

For I have not always lost. Only a little while ago I asked my wife to buy 20 shares of Consolidated Gas when she was in town, and she made a mistake in the name and bought Consolidated Gadgets. Imagine my feelings as, sitting in my office a few days later brooding sadly on the unexpected drop in Gas, I was called up by my broker and congratulated on the 50-point rise in Gadgets!



Ned P----- wins the All-America Howler competition with the following: St. Lawrence waterway conditions could be improved by a judicial damning.



Quis?

My name is Reginald D'Arcy. My
governor's an Earl.
I'm an Eton man, an Oxford man,
Fresh from London's whirl.
To this beastly rotten College, beastly
rotten, yes I say,
By force of circumstances I have
had to make my way.
Well, heah I am, bah Jove, I'm heah.
Oh yes, oh dash it, yes,
To engage in gentlemanly farming
is my ideah just more or less,
I'll buy a thousand acres or so, engage
a man or two,
And ride around in a Packard and tell
them what to do.
At Macdonald I've lived three months; this
country is really frightful
Canadian customs you really
can't, no you really can't call delightful.
For as I meander around the campus, I
might be a perfect ass,
The way the girls giggle is silly, yes,
silly, whenever they see me pass.

L'Envoi.

I've been here three months or so,
This is no place for little Willie,
So I'll pawn my bloomin' outfit,
And hike me back to Piccadilly.

—W.P.



The prize for the best student effort published in the last issue of the Magazine was awarded to Miss Helen Brass for the design printed under the title "The Tree we Cultivate."



Co-Education

THE terrible problem of developing, cultivating and bringing to their full flower the various physical, intellectual, aesthetic, gastric, terpsichorean, tonsorial and moral faculties of youth and maiden is one which has long bothered the pens of literary geniuses; and many and varied are the views which have been expressed. But if a variety of ideas is a sign of genius then I have *It*.

Being hurled into the arms of co-education at a susceptible age, and emerging four years later, uncontaminated, unruffled and unwed, the writer feels amply justified in grasping determinedly his literary weapon and penning the views which are to follow.

The male mind is fundamentally based on a foundation of high intellectual achievement and moral stability, but the introduction of a new factor into the universe, namely Woman, immediately produces a devastating stimulation which rots the very fibre of mankind and threatens to ruin the world. No finer or more depressing example of co-education could be instanced than that of our own fair Alma Mater, situated as it is on a beautiful site overlooking the Ottawa river at Ste. Anne de Bellevue, Que., twenty miles west of Montreal, eight minutes walk from the C.P.R. station, three from the Bay, within easy call of at least two religious institutions and, for most of us, about fifty years from Heaven (or somewhere else).

A review of our daily round will serve to express, illustrate, expound and show the reason why young men leave home. At an ungodly hour which seems like three a.m. the domicile devoted exclusively to the harbouring of the male element in this land flowing with milk and pea soup, bursts into feverish activity and the race is on. Provided that previous nocturnal activities have been normal, one oozes across the campus, either by braving the rigour of our Northern climate or by burrowing through subterranean alleys, and eventually reaching the domicile of Mimaville to be greeted by the stimulating effluvia of one-way bacon, floor polish and other exotic perfumes which must serve to tide us over until high noon. After painfully maintaining a vertical posture and listening to the chaunt of maiden voices rendering their thanks for nourishment past received and giving optimistic thanks for what they are about to receive, one settles down to analyse the victuals set before us. What could be less encouraging for such a task than the spectacle of hordes of young Amazons clad in various degrees of disarray (at least three inches below bend of knee at back, and of special material obtainable from the Bursar at reasonable prices). Such visions immediately and completely dispel those pleasant gastronomical dreams which enticed us from our virgin couches before the dew had properly settled.

Sustained only by the recollection of a glass of whitish fluid secreted by the mammary glands of the females of the class mammalia, species cow (pure-bred Ayreshire 2.5% butterfat, 97.5% something else, calories ad. lib.) one hurries to lectures thirsting for knowledge and hoping for the best. Hour after hour one toils

on through the long hours of the morning, at times literally swamped by throngs of females looking for their mail and sticking around generally, waiting for Joe or Ralph in the corridors.

Then comes the zero hour. This is lunch-time, when we take our daily beef mid the shrieks of ravenous girlhood and take what they cannot lay hands on. Following this 'hearty meal' a few simple souls ruin their chances of heaven (and their digestion) by dallying in idle chatter with their loved ones in the vestibule devoted to the art of 'fussing.'

And the afternoon is worse. Rendered useless by disturbing thoughts of the time to come, down at The Bay, and shortened only by snatches of fitful slumber, it ends with yet another hectic meal and further dalliance, ended to the tune of: "Say good-night now. Didn't you hear the bell ring?"

Such is the world we live in. And little wonder that the writer, schooled as he is in the wiles and pitfalls of co-education, finds solace in unburdening his soul on paper and setting forth the views of one who can still remain indifferent and untouched by this devastating flood of femininity.

But now the pall of night creeps o'er silent spaces, and, gazing across the snow-blanchéd campus toward the twinkling lights which shine upon the damsels, the flitting shadows once again impede the priceless train of thought and set to rout the peace of mind which is so necessary to literary achievement.

Lost is our freedom
When we submit to Woman so.
Why do we need them,
When at their best they bring us woe?
There is no wisdom.

E. G. Sharvelle.



IT HAS BEEN SAID

That Woman laughed Man from the jungle into a home. She laughed him into clothes and she has led him through the ages unimproved, unchanged, unbearable, still of, for, and fitted to jungle life—a playful monkey. She might better have halted and skinned him alive.

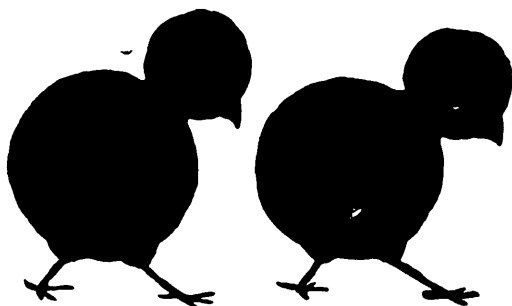
—MacLean's.

The Bachelor's Club

A FANTASY

In a book that I found in the Library one day,
I chanced on a magic phrase, cryptic and gay.
It at once raised a vision so chock full of cheer,
Of chapels of chaps drinking barrels of beer:
Toasting bebies of maidens in couples of cups,
With waiters run ragged to serve the young pups
In a high vaulted room, lined with great gruesome guns
With which to withstand a deluge of duns.
Where no bevy of maidens, or giggle of girls,
Could stop or embarrass the chortle of churls,
Roam, in plus-fours and stockings, a herd of young buck
Betting buckets of booze on a turn of the luck.
And among them, escaping from billions of bills,
Float a mention of men with a liver of ills
Caused by ancient excesses, wild oceans of oats.
A dozen of dandies amid the gang floats,
With a sight of smart suiting, a spattering of spats
And a shaking of hands and a backing of pats.
While a whisper of whisky, a jingle of gin,
Joins a sizzle of soda as it splashes in.
And deep in the cellar cats kill rabbles of rats
Among piles to the ceiling of victuals in vats,
With profusion of spiders and millions of mice
Around bacons and cheeses and all things nice.
In short I sat dreaming of Life's pleasant hub:
The living of life in the Bachelor's Club.
(I crawl to confess, with a knocking of knees,
What inspired this vile verse was a "gaggle of geese.")

—D. Harvey.



JUNIOR ADS.



On Becoming an Uncle

The news flashed across three thousand miles of ocean and five hundred miles of land while I slept in my bed. In a mere spark of the telegraph, as it were, my former life of self-interest and independence was changed to one of responsibility. I am now an uncle. I am now a family man.

Some men would be inclined to laugh at my anxiety, my quickly assumed sense of duty. But these are either non-uncles (a state of bliss so far unrecognised by the Oxford Dictionary) or not proper uncles. There are others who will sympathise with me. They, too, realise that uncleship is no sinecure, no office to be lightly cast aside. It is a position fraught with awful consequence. I know, for I had an uncle of my own, and by a mental process of substituting uncle for nephew, similar to the interchange in Anstey's "Vice Versa", I fully realise the ardours of the avuncular task.

The child accepts the father as being a necessary part of his small landscape. The father is quite a normal unit in the scheme of family life. He is sometimes a sort of shadowy counterpoise to mother, sometimes an impartial deity to be propitiated as often as possible and occasionally to be persuaded into some bountiful manifestation of godly power.

With uncles it is different. The uncle is not like a common gem, viewed every day so that its flaws as well as its perfections are a matter of common knowledge to the children. The uncle is like a jewel, whose brightness of novelty and whose infrequency of appearance allows of no critical examination. He comes and goes with his glamour still emanating to the full. That is, if he realises his avuncular responsibility and lives up to it. Thereby hangs the task.

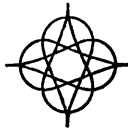
As a matter of personal pride, Uncle attempts to prolong the illusion, resorting to various acts of noblesse oblige, such as the distribution of the proverbial half crown (it may be and often is, his last!), with other forms of propaganda. To cloak his fear, he performs a series of well known acrobatics—taking the children on his knee, slapping their backs, giving them a playful dig in the ribs, kissing the little girls; all forms of physical endearment calculated to win their young hearts. The youngsters reply "Oh, Uncle you are nice" or "cute" or "funny". And uncle's pedestal goes up one place higher in the youthful hall of fame.

Thus it is that the cares of my new office are weighing heavily upon me. Like many other mediocre men, thrown suddenly into the glare of comparative fame, I feel that I do not fully deserve the honour which has been so suddenly thrust upon me. I am so conscious of my own weaknesses that I can never accept with any confidence the worship that I will probably receive from my nephews and neices. The ermine cloak of uncleship will always fit me badly, for I will always feel unworthy of it. Only the thought that the reputation of millions of other bachelor uncles will lie in the palm of my hands will give me the courage to carry out my obligations.

In the meanwhile, I must collect my thoughts and write a letter to the happy parents, acknowledging the news, accepting the contract of avuncular duty, and congratulating them on the wonderful miracle whereby they have produced another man child to gladden our hearts and eyes.

At the same time I must write another letter to the authorities responsible for the aforementioned Oxford Dictionary, suggesting the introduction of some suitable epithets and nouns to replace such clumsy words as avuncular, uncular, unclehood, and uncleship. Until then I feel that I cannot write, with dignity, any more about this serious subject.

—H.A.U.M.



We wanna know:—

If G. MacL--d has found the ideal woman yet.

If the Country Gentleman is the Ladies' Home Companion.

Who the big bad man is who chases the little girls home from Church with snowballs.

Who thinks the Post Office is the foyer between 1.00 and 2.00 p.m. on Saturdays.

If Life is Judged by College Humour.

Why gentlemen may not escort the kiddies to basketball games.

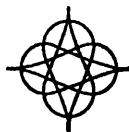
If it is a rule that science women must chew gum.

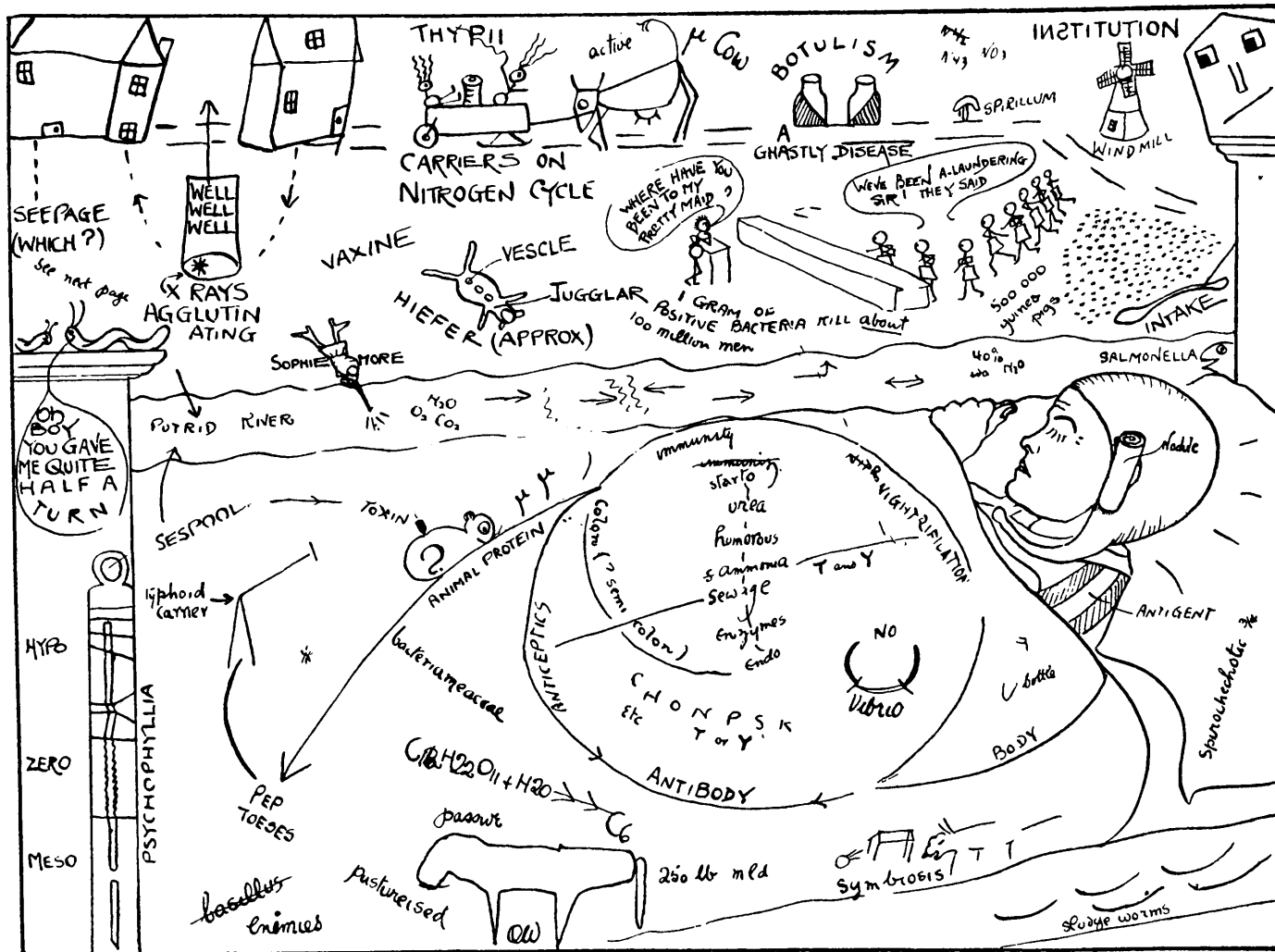
Who supports the treasury of the House Committee.

Why the corners in the foyer are so popular after meals.

Who the College "Mutt & Jeff" are.

—Shavag.





The Examiner's Dream.

Art Profaned

A money prize is now awarded for the best student effort in each issue of the Magazine.

Chaste Muse of Poesy from your peerless throne,
Incline your head to hear my grievous plaint.
Your name has been defiled by wordly use
Of money with its base, financial taint.

Of yore, myself and others in the horde
Of amateurs, would heap your altar high
With freewill offerings. Art was our only gain,
Or sweet appraisal from our lady's eye.

Romantic verse would often hold us back
From welcome slumber, while with midnight oil,
Our odes and sonnets we would pen to earn
Dear Fame's uncertain garland for our toil.

I well remember in this golden age
Of student innocence, one night all through
I wrote a long and highly coloured ode
In praise of drops of early morning dew.

My Muse, my sole reward your favour was
No gain I hoped for or, indeed, obtained
My poem, hateful to the Editorial mind,
Was cast into a box and there remained.

To what base use our Art has now returned!
For nowadays our students must compete
For dollar bills! While with enfevered minds
They strive all day their rival hacks to beat.

Some pale young scholar, hopelessly in debt,
From too much love, will now attempt to write
For lucre, and thus most shamefully defile
The virgin slopes of Great Parnassus' height.

Sweet Muse, avert your lovely head again
And blind your eyes to this infernal schism.
For this is Art no more. But we can save your name
By just describing it as "Journalism".

—H.A.U.M.

Fighting Against Winter

“**T**IME will see the fulfillment of our hope for Montreal as the great distributing centre for the products of the West. With the ice problem solved, nothing can prevent that city from becoming the greatest sea-port in the World.”

This is an extract from the report of the Canadian Engineer in May, 1910. That was twenty years ago, and Montreal has not yet exceeded all other sea-ports in her annual shippings. This is solely due to the fact that the ice problem has not yet been solved. However, I speak of yesterday. Within the last few years, Dr. H. T. Barnes, of McGill University, has, after thirty year's study of the subject, evolved a scheme which will, I firmly believe, effectively solve the ice problem; provided it is properly executed. Dr. Barnes' opinion has always been: “The port of Montreal is what it is in spite of the ice, and surely the one great handicap of the Northern route is worthy of the most careful study and consideration. Yet so used are we to this “Act of God” that year after year we have become more and more callous to it, and have settled down into a state of suspended animation waiting the “open sesame” which will overcome all troubles.” Unfortunately, ice will always be with us, and it is necessary to make concentrated efforts towards preventing and controlling it.

Even if it were not possible to keep the river open for navigation the whole year round, the scheme is worth considering. An extra month of navigation would eliminate the yearly rush to get the grain shipped in the fall before the river closes, and would save immense sums which are spent each fall in transporting the grain by rail to the coast. It has been estimated that the loss to Canada through the freezing up of the river each year is equivalent to \$15,000,000 each week. One week's outlay would be adequate compensation for the initial outlay necessary for Dr. Barnes' scheme.

Dr. Barnes has outlined two schemes for the control and prevention of ice. One is the destruction of ice each year by chemical and physical means. This would entail a considerable expenditure each year. The other scheme is more of an engineering feat, making necessary a greater initial financial outlay, but a considerably lower annual upkeep. Each scheme merits careful consideration. Let us deal with the first one; this being considerably easier to understand.

As far back as 1886, the Montreal Harbour Commission concluded that a great deal could be done towards relieving the flood danger in Montreal, and towards opening the navigation season a little earlier by keeping the St. Lawrence clear of ice from Montreal to tidewater, and that this was perfectly feasible by means of ice-breakers. Ice-breakers were authorized, but were not put into commission till a much later date. They proved to be invaluable, but were rather hard to navigate in certain parts of the river. The use of explosives was thoroughly tried out to break up the ice jams, but was found to be little good in the great masses of packed ice.

The use of *thermit*, a chemical preparation, as a means of producing great heat has been known for some time. Thermit is a mix-

ture of iron oxide and aluminium which, when combustion is started in any one spot, burns freely, forming aluminium oxide and molten iron. The heat produced is so intense that the molten iron which carries the heat is too bright to look at without dark glasses. A temperature which varies from $2,500^{\circ}$ to $3,500^{\circ}$ centigrade is produced in a few seconds. Dr. Barnes conceived the idea of using thermit to break up ice jams. What actually happens is that when the molten iron comes in contact with the ice a second reaction takes place which decomposes the H_2O molecules into oxygen and hydrogen. The oxygen is fixed by the iron to iron oxide, while the liberated hydrogen takes fire and burns with the oxygen in the air. Such a rapid evolution of gases takes place that a slow explosion occurs. Little or no noise is produced, and the reaction is admitted by experts to be the slowest explosion known. On account of this fact, it can do no harm to concrete structures, such as bridges or dams which come into contact with the reaction. Moreover, no harm has ever been done to fish in rivers or lakes where thermit has been used. Thermit then, has proved to be very effective in the breaking up of ice jams which impede the progress of the icebreakers in keeping the river open from Montreal to tidewater. One peculiar thing about the process is that there is no immediate result. It is not until two or three hours after the firing of the thermit charge that the ice jam begins to break up and float away. The thermit is placed in steel cans and is fired by means of an electric spark.

This, then, is Dr. Barnes' scheme for keeping the St. Lawrence open from Montreal to tide-water. It entails a considerable annual expense, but has proved, on the other rivers, to be a very effective method of controlling ice.

The other scheme deals more with the prevention of ice than with its control. This scheme is based on the fact that Lake Ontario, the head waters of the St. Lawrence, represents an immense heated area of nearly 7,000 square miles. Dr. Barnes maintains that, if properly utilized, these waters are capable of reducing the ice formation in the river at least sixty per cent.

To be able to understand correctly the *pros* and *cons* of this scheme, it must be realized that the St. Lawrence river system comprises three main sections: The Navigation section; The Power section; and the Recreation section. The first extends from the Gulf to Montreal, the second from Montreal to Prescott, and the third from Prescott to Lake Ontario. It is ice that hinders the greater development of the navigation system, it is ice that make the Engineers halt in the development of the Power section; it is ice that, in the Recreation section, shuts up the hotels and cottages and grips the country with an iron hand. It is to ice, then, that we pay our tribute in enormous losses each year. Solve the ice problem and each section will benefit.

The St. Lawrence river is really a river within a river. The main stream follows a definite channel through Cape St. Vincent and south of the islands to the tidewater. That is to say, it follows the navigation channel with surprisingly little deviation, even in the rapids section. The second river filters through the bays and shallow areas all the way down, contributing to the early formation of ice, and to the ultimate damming of the river by ice jams.

For it is a well-recognized fact that the river would never close with ice if the main channel were not impeded by the great sheets of ice which swing across the current. Indeed, natives have often resorted to this expedient to obtain an ice-bridge whereby they could cross over the river. Hence, by deepening and straightening the channel, by cutting off the great shallow cooling-areas, the main stream would remain open throughout its course. The result of an open channel is to store up all the sun's heat by day, whereas an ice covering scatters the sun's rays. The maintenance of an ice covering far enough up stream so that little or no small ice could be produced would be a great advantage, but this is impossible on the St. Lawrence. The river is continually being fed by water at a temperature above freezing, and hence the ice barrier would be continually moving up and down the river, and great jams would occur.

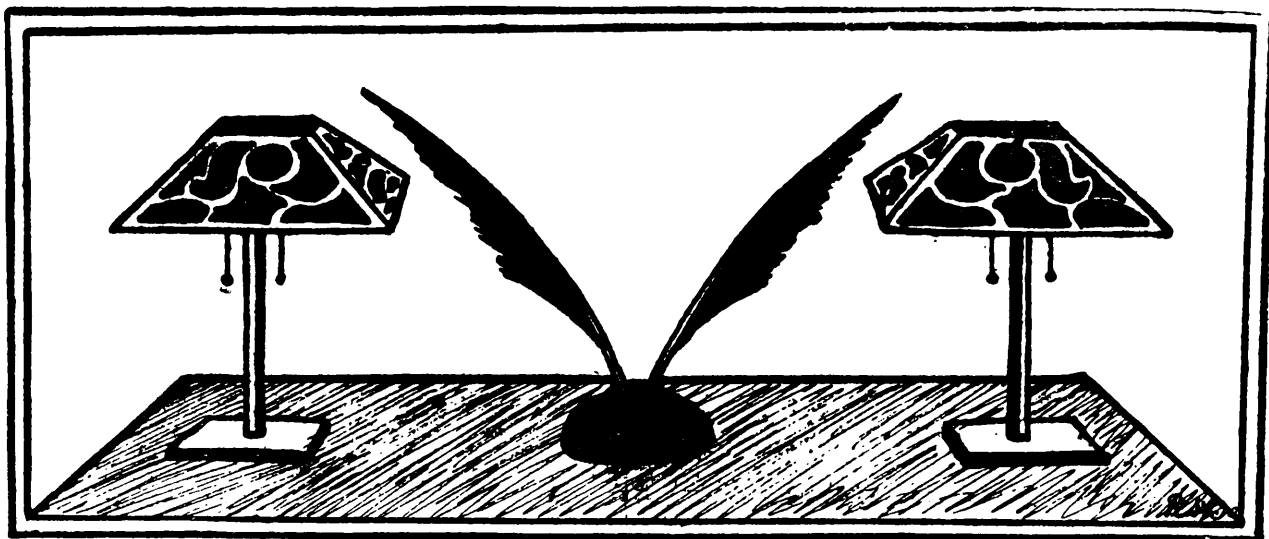
Another important item in the scheme will be to divert the cold waters of the Ottawa river, which always freeze long before those of the St. Lawrence, to the north channel of the Montreal island. This alone would delay the "freeze-up" of the harbour waters for several weeks.

The months of December and January are the two principal ice-forming periods, and in the International section, the river maintains itself free during December. After January the increasing power of the sun maintains a balance between new ice and ice melting. After February the ice rapidly grows less. We have only the period of January to deal with, then. Hence by judicious damming to ensure a steady flow of water from Lake Ontario, and by reducing the cooling areas to a minimum, thus using the maximum heating powers made available by the lake, the river could be kept open the whole year round.

In addition to preventing ice formation, this scheme would raise the level of the waters in Montreal harbour, the lowering of which has been a serious problem for the engineers in recent years. Also, it would mean that more primary horse-power could be developed than by any other method. Furnishing over 600,000 horse-power within a very short time. Another important factor is that it would considerably raise the temperature in Montreal itself. This has been proved by the rise in temperature since the ice-breakers started operations twenty years ago.

This scheme would involve great expenditures, admittedly, but as authorities say it would mean an increase of \$15,000,000 in the trade returns each week, adequate compensation would soon be obtained. Dr. Barnes has thought out every detail of the scheme carefully, and, given the support of the government, he will undertake to carry it through.

—E. Price.



Inter-Collegiate Debate

Macdonald registered another victory in Inter-Collegiate debating on January 20th., when they succeeded in overthrowing a motion which deplored the emergence of woman from the home, upheld by J. G. Renny of Bishop's College and H. Faubert of the University of Montreal. The College representatives were E. A. Eardley and J. A. Rayner.

After a few words of welcome from Mr. Lawrence, the chairman, the first speaker for the Affirmative, Mr. Renny, took the floor. In a pleasing speech he deplored the emergence of women from the activities of the home, and their entrance into positions in no way allied to it. He layed at the door of emancipated woman the present "jazz-mad" age, the depleted population of Canada and the poor health of factory girls. Mr. Renny introduced an element of humour into his speech which was much appreciated by the audience.

The leader of the Negative, Mr. Rayner, gave a very concise and clever speech, pointing out that women constitute half the population of the world, and that to desire the return of woman to the home would be to desire the virtual enslavement of fifty per cent of the people on this earth. He saw no reason to deplore the emancipation of women, in view of their proven capabilities, and showed that the supposed inferiority of woman to man has long been disproved.

The second speaker for the Affirmative, Mr. Faubert, treated the matter perhaps a little too seriously. His principal argument, and one which he stressed repeatedly, was that of the Mother's part in family life; particularly in matters pertaining to the health and discipline of the children. A tutor is capable of training children to be good scholars, but only a Mother can make of them good citizens. He thought women unfit for commercial life and drew from his experiences as a medical student to enforce his arguments.



THE MEN'S ATHLETIC COMMITTEE.

Mr. Eardley, speaking for the Negative, rebutted the main contentions of the Affirmative, and, in a very refreshing address, showed that the whole-hearted co-operation of men and women, both in social and business life, is essential to the maintenance of a harmonious unit. He enumerated many positions, quite apart from the home, that were more adapted to women, and showed that, contrary to prevalent ideas, women to-day were chosen for positions entirely on a basis of competency.

The three judges, whom we wish to thank for their very kind assistance, were Mr. Harpell of St. Annes, and Professors Scott and Scarth of McGill. We wish, also, to thank Mr. Frank Millinchamp and Mr. R. Musgrove for the excellent entertainment which they provided during the deliberations of the judges.

—R.A.B.

The Importance of Being Earnest

THE Player's Club were particularly happy in their selection of the first finished play of the year, and particularly successful in their presentation. That they were not equally fortunate in the quality of their audience is no fault of theirs.

A large audience was entertained by Wilde's delicious comedy "The Importance of Being Earnest." Those who followed the play enjoyed a spirited interpretation of its stimulating wit, and the giggles of girlyies recognising acquaintances on the stage were evidence of the diversion of another large section of the audience.

Miss Irvin as the governess, Miss Toller as the Hon. Gwendolen Fairfax, and Messrs. Fyffe and Henderson in the leading male roles, deserve special mention for the excellence of their work, and an "all-star supporting cast" composed of Miss Mackey, Miss Shepherd and Messrs. Monro, Boothroyd and Harvey, fitted into their parts with an engaging naturalness which says much for their abilities and for the efforts of the producer, Mr. Lawrence.

Reading Room

The Reading Room in the Men's Residence has been continued this year as in the past two years.

Contributions of reading matter have been received from ladies and gentlemen both from the College and from the village. To these donors the men students wish to express their hearty thanks.

Any person desirous of contributing newspapers, magazines, etc., may do so by communicating with G. K. Parris, Box 171, College.

—G.K.P.



Hockey

Macdonald v. St. James United Church, Montreal.—Jan. 11th.

The first hockey game of the season was marked by the introduction of a little combination into Macdonald hockey, and the justified jubilation of Coach Sharpe.

In the first period Macdonald played better hockey than has been seen around here for some time, scoring four goals to their opponents' one. The next two periods showed a slight falling off, but were noticeable for some excellent work by Millinchamp, Archibald and Walker. The final score was 7-2; Archibald, Richards, Cox, Proudfoot, Millinchamp and Walker, being the scorers for the College.

The number of 'rooters' was disappointingly small.

Macdonald v. Wanderers.—Jan. 22nd.

Weakened by the absence of one of our regular forwards, the team failed to repeat their previous success and, playing poor hockey against a weak opposing team, went down to a score of 2-0; Tait and McDuff scoring for the visitors in the first period.

The college never showed any team-work and were lucky to escape as cheaply as they did. Some individual work by Archie Walker, whose back-checking was a feature of the game, was the only bright spot in an otherwise dreary exhibition.

Macdonald v Arts '30. January 25th.

Playing in half a gale and a heavy snowfall, the College had bad luck in facing the wind for two of the three periods, and were beaten 3-2. No one member of the team deserves special mention, with the possible exception of Ness, the substitute goaler, who turned in a very sound game. Walker scored both goals for Macdonald.



Basketball

Macdonald v. Westmount Y.M.C.A. Intermediates.

In the first game of the season the Macdonald squad showed already the effects of Frank Sharpe's coaching; the Westmount Y.M.C.A. Intermediates being beaten by a score of 33-22.

The College took the lead from the first. Wolfe, MacCuish and Millinchamp scoring several times, and the squad playing well against a team with rather less combination. 22-6 was the score at half time.

In the second half, frequent changes in the College team rather slowed up the rate of scoring, but the game was a very good start to the season. The defense work of Jack and Woodward was a feature of the play.

Macdonald v. All Saints.—Dec. 10th.

A fast game between two evenly-matched teams. The College soon settled down to playing on a strange floor and took the lead with some fine work by MacCuish and MacVicar. At half-time the score was 17-7 and this was, later, taken to 36-23. All the Macdonald men turned in good games, but Richards, MacCuish and Millinchamp were, perhaps, outstanding.

Macdonald v. Westmount Y.M.C.A. Seniors.—Dec. 14th.

After a series of victories, a sound beating by a team which could really play basketball, was, perhaps, the best thing that could have happened to our squad.

The medicine was administered by the Westmount Y.M.C.A. Seniors: the score being 58-28. In one of the fastest and most interesting games ever played in our gym. the Westmount Seniors gave a fine exhibition of team-work and our own team did well to hold them as they did.

For the College, Millinchamp was perhaps the most noticeable player, his shooting being, at times, pretty close to the miraculous.

Macdonald v. St. James United Church, Montreal.—Jan. 11th.

This was the most disappointing exhibition which has been seen on our floor for some time. The amount of 'crabbing' and dirty play being excessive, even for a church team.

The silver lining to the cloud was the play of two newcomers to the game, Frerichs and Fisher, and the old stand-by MacCuish.

The College won: 48-22.



Congratulations to Frank Sharpe on his appointment to the position of Supervisor of the Montreal Playgrounds. We are glad to learn that Mr. Sharpe's new position will not rob the College teams of his invaluable services.

Wrestling at MacDonald

For some reason or other the sport of wrestling has not received very much attention at Macdonald College, and this year's attempts are somewhat of an innovation. New though the idea may be, however, we have hopes of doing something this year and of laying foundations for future development of the sport among our students.

The first active steps toward organizing the sport were taken early in the year and a meeting of those interested was held on Monday evening, October 13. A dozen or so attended the meeting and it was decided to organize the sport. D. F. Putnam was elected secretary and practices were arranged for Tuesday and Thursday evenings in each week under the direction of Lewis Wolfe.

The practices were fairly well attended, and those who kept up their interest have felt that the effort was quite worth while. Our first chance to show what we could do came with the Wanderers Hockey Club smoker on Monday evening December 16, when three of our men Atwood, Gibb and Wolfe wrestled against members of the G.M.H.A. of Montreal. Atwood and Wolfe both wrestled their men for full time to a draw, while Gibb was beaten by a tricky fall only after a fine exhibition of wrestling in which he appeared to be having the advantage.

Since the holidays the wrestling squad is carrying on as usual. A number of men are now going in to McGill to practice under Coach Smith and will undoubtedly give a good account of themselves in the Interfaculty competition. In fact it is probably not too much to say that two or three of our men have an excellent chance of making the McGill Intercollegiate team.

While we have not had a regular professional coach, we have been very lucky to have an experienced wrestler, Mr. Lewis Wolfe, as our mentor and he has not spared either time or effort in trying to make our sport successful.

—D. F. Putnam.

R. J. P.
D. E. MacC.



Agricultural Alumni

J. K. King, '13, is Secretary of the Canadian Live Stock Co-operative Association.

R. M. Elliott, '17, located at Moncton, is Manager of the Maritime Marketing Board, and one of the directors of the Canadian Live Stock Cooperative.

W. C. Tully, '25, is Extension Poultryman, stationed at the State College, Fargo, North Dakota.

C. R. Mitchell, '24, is with the Forest Products Laboratories, 3420 University Street, Montreal.

H. W. Brighton, '23, was reported in the last issue as having received instructions to report to Rio de Janeiro under the Canadian Department of Commerce. Before his sailing it was decided to send him to Buenos Aires.

Miss M. G. Russell, '27, is now in Montreal. Her address is 2026 Jeanne Mance Street.

G. Lelacheur, '13, is with the Seed Branch Laboratory, at Sackville, N.B.

J. D. Sutherland, '22, and G. H. Bowen, '23, visited Macdonald during the Christmas Holidays.

T. G. Hetherington, '17, visited the College when on a business trip to Montreal, after an absence of ten years.

Seven members of last year's graduating class are taking graduate work. R. E. Fitzpatrick at Toronto; C. Taylor at Cornell; E. Lindsay at Minnesota; R. Holcomb at McGill; L. Howatt and L. R. Finlayson at Macdonald. W. Whitehead has been appointed to the staff of Macdonald, and is also registered as a graduate student.

The remainder of the class are located as follows:

F. S. Olmsted is in Hartford, Conn.

E. C. Paige is on the staff of the Fruit Commissioner at Montreal.

A. Pickett is Provincial Entomologist for Nova Scotia.

A. E. Johnson is with the Mapleleaf Dairy, Halifax.

R. B. McCormack is at the Plant Pathological Laboratory at Fredericton.

N. B. McMaster is in the Bacteriology Division at the Central Experimental Farm, Ottawa.

C. Harvest is with Sutton's the Seed Merchants in England; and Miss M. Hawkes is with the Family Herald and Weekly Star, Montreal.

The Memorial Scholarship by the Alumni Association is open to the Macdonald graduates in agriculture for graduate work, and is tenable in any recognized university. Applications, received till the first of August, will be considered for the academic year 1930-31.



Faculty Items

Dean Barton and Dr. Lattimer visited Huntingdon district on November 7th, in connection with the investigation of milk production costs in that district. On November 16th, Dr. Lattimer visited this district again and attended a large meeting of milk producers. Mr. Charles Boyce of Huntingdon, an ex-student of Macdonald, was engaged to obtain data under the direction of Dr. Lattimer.

Dean Barton attended the Royal Winter Fair, Toronto, and gave an address at the banquet of the O.A.C. Alumni Association and the C.S.T.A. on the evening of November 22nd. Others attending the Royal Winter Fair from Macdonald were: Professor Summerby, Professor Bunting, Dr. Lattimer, Professor Ness, Professor Maw, and Mr. L. H. Hamilton.

Dr. Snell attended a meeting of the Council of the Canadian Institute of Chemistry in Ottawa on January 3rd.

Professor W. A. Maw attended the Provincial Poultry Instructors Conference at Quebec City January 21st to 23rd, during which the poultry policy for the Province was drawn up.

Professor W. A. Maw broadcasted a short talk on—"Opportunities for Poultry Production in Quebec" over CKAC "La Presse" on January 9th.

Professor L. G. Heimpel attended the convention of the North Atlantic section of the American Society of Agricultural Engineers at Massachusetts State College, Amherst, Mass., October 17, 18, and 19th. last.

Dr. McKibbin has given two popular lectures recently—one entitled "What we all come from and where we all go" at St. Andrews East in November, the other "Precious minerals of everyday life" before the Montreal Mechanics Institute in January.

The names of Drs. J. E. Machacek, J. E. Maynard and W. Rowles (as well as those of some Macdonald Graduates) appear in the "Fellowships, Studentships and Bursaries Who's Who" recently published by the National Research Council.

Mr. F. G. North, formerly of the staff of the Department of Agricultural Engineering, is now with the Stinson-Reeb Co., Montreal. We are glad to report that Frank is highly successful in the "practice of what he used to preach" to his students.

Mr. O. J. Trenary, specialist in Agricultural Engineering, from Wisconsin University, has been appointed as lecturer in Agricultural Engineering.

Mrs. Louise Wiessman of Madison, Wis., announces the marriage of her daughter Helene to Mr. Orville J. Trenary, B.S.A., on December 31st., 1929.

Exchange Department

Under the direction of W. Penney, Ag. '31.

"ACADIA ATHENANEUM"

We welcome your magazine to our exchange shelf. The arrangement of material is very well done. There are several interesting articles which we have read with pleasure, some of which are very humorous.

"MANAGRA"

A very welcome exchange. Your articles are very well written. But we would suggest that you separate your advertisements from the contents of the magazine.

"TECH FLASH"

We have noticed with interest that you are now having the copies of your magazine printed instead of mimeographed, and have clothed the well-written contents with a very attractive cover. In its new form the "Tech Flash" moves forward into the front rank of College magazines.

"O.A.C. REVIEW"

The "O.A.C. Review" is one of the best numbers we receive. It is always original. The articles are nearly always well written and for the most part entertaining.

"THE GATEWAY"

The Gateway's editorials are of especial interest to us. The articles are varied and oftentimes sparkle with humour. It is the type of college paper that depicts the real college spirit behind it.

"DALHOUSIE GAZETTE"

The oldest college paper in America still maintains a standard for many other college papers to follow. While possessing a somewhat sober tone as befits its age and tradition, many of its articles sparkle with the joy of college (co-educational) life.

We have received several other magazines. The Sheaf, The Illinois Agriculturist. The McGill Daily. The McMaster University Monthly, which we will review in our next issue.



Their Jokes Are Much Better Than Ours

First Co-ed (in dining hall)—“It’s hard to think that a poor horse should be destroyed just to satisfy our appetites.”

Second Nit-Wit (Struggling hard)—“Yes it is kind of tough.”

Bill.—“When was the Revival of Learning?”

Ran.—“Just before the exams.”

Want.—Well this place certainly turns out fine men.

D’Arcy.—When did you graduate?

Want.—Didn’t graduate; they turned me out.

There was a young lady named Bright,
Who would travel much faster than light,
She started one day
In the relative way,
And came back the previous night.

Ex.

W. P.—entering exam room.

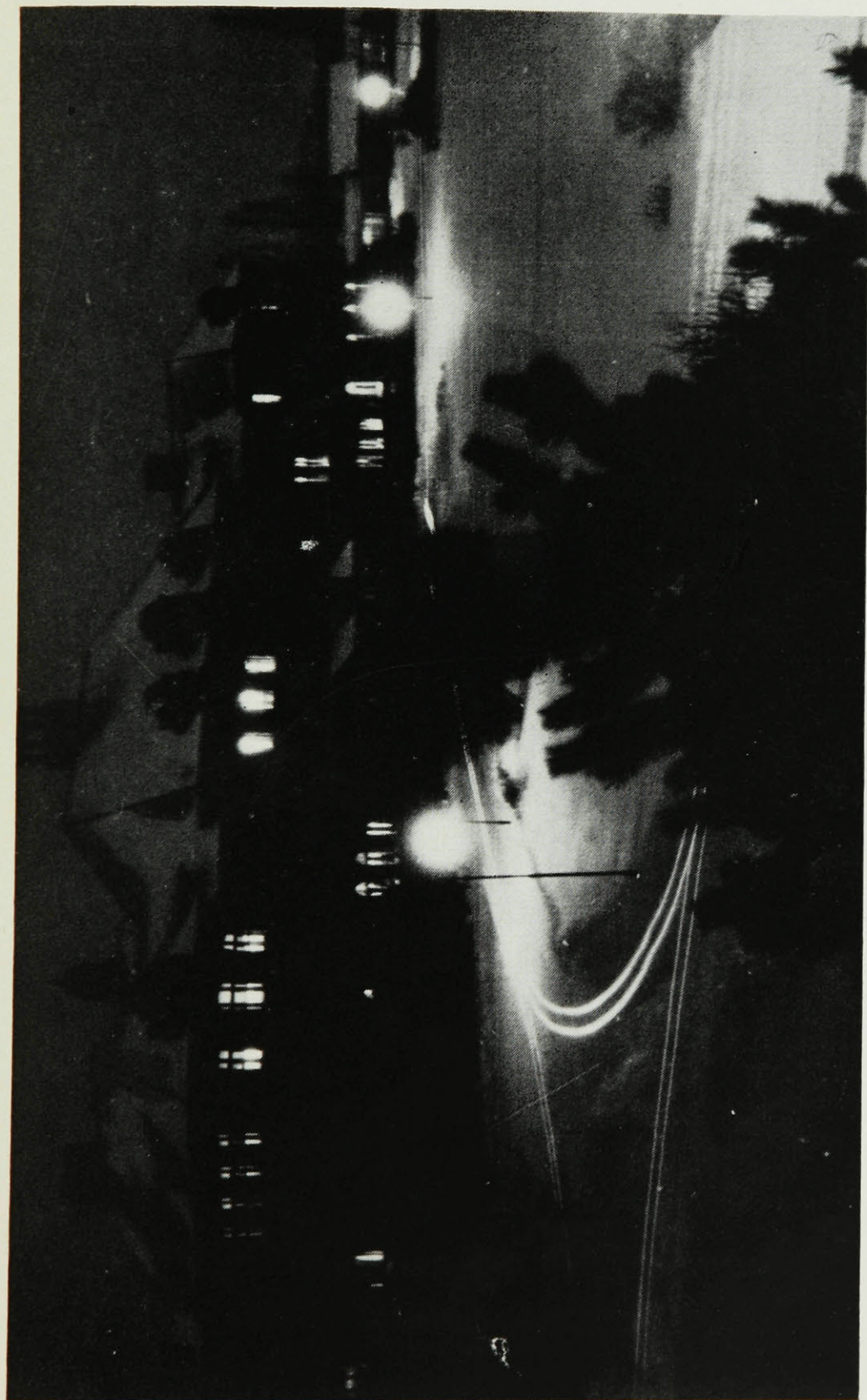
“Lord God of Hosts, be with us yet,
Lest we forget, lest we forget.”

There is a young girl of Quebec
Who in Winter does ardently neck.
To keep one’s self warm
It’s quite proper form
To neck like the heck in Quebec.

Ex.

Them Collitch Pitchers

We were more than mildly amused during the holidays by a college picture which was offered to the long suffering public for their entertainment. You know the story, they’re all the same—a boy and a girl, another boy who acts like a heel throughout and then finally rings the other’s hand and presents him with the girl and an apology, a football coach and a rugby team, some home-made cheers and some long shots from a Stanford vs. Southern Cal. game, and so on. Well, in this particular one the story had staggered to the point where the men were in the dressing room at half



THE MAIN BUILDING BEFORE THE REFORMATION

time of the big game and they were chasing the other lads home by some 7 points. The coach looks over his warriors smeared copiously with grease-paint, cocks his Rocky Ford cigar (5c) at a jaunty angle and comes out with something like this—

"Men ——— —pauses dramatically but no one disagrees with him and he continues—men of Stanford, you are losing. This statement also goes unchallenged—This is the last year I will coach you —someone mutters "Thank Gawd"—and I want tender memories to take back to that little chicken farm in Podunk. Fellows, where is your college spirit?—the information is not volunteered and he starts again—I am disappointed in you—yes I am. Now there are 60,000 cash customers and 10,000 students out there pulling for you and you are letting them down. Voice quivers with emotion and he takes advantage of the pause to relight the stogie—Men are we going to see the orange and pink trampled under the feet of these guys?—someone asks "I'll bite, are we?" Fellows that's all I want to say and I want to see you go back in here and win — win for dear er-err-Oh yes Sanford. Voice cracks completely and he flees from the room overcome with emotion.

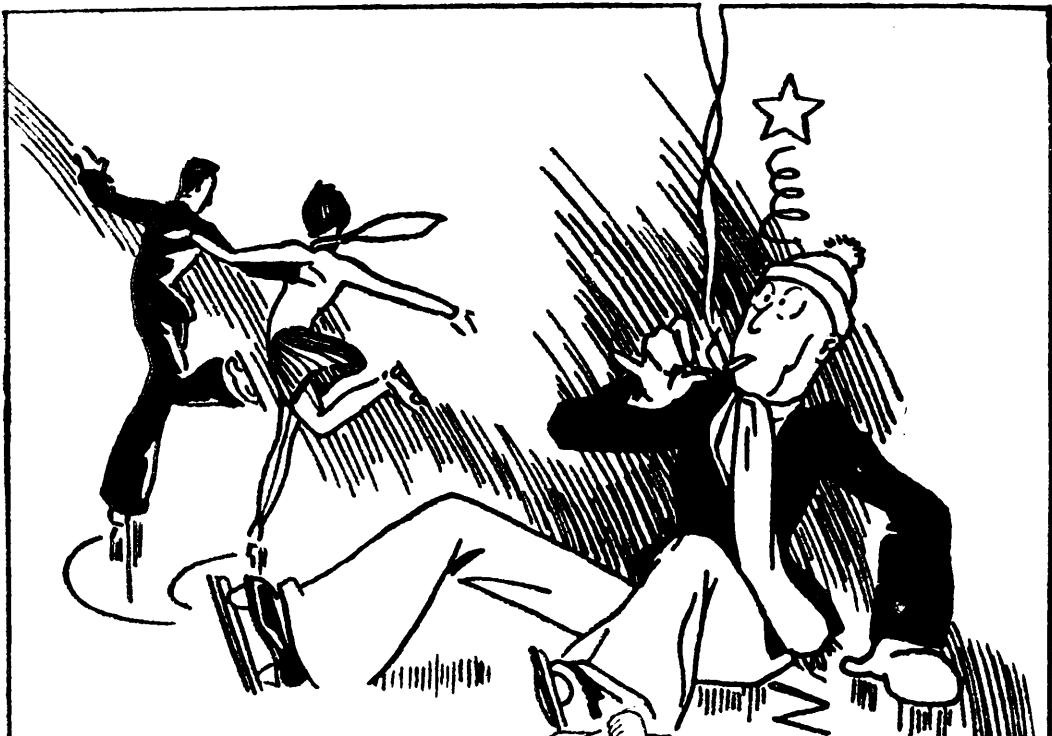
Now you know folks, that football coaches don't talk that way. Of course they don't. Just to show you that we are not going to see any freshmen or even sophomores going around with a distorted image of coaches as how they are, we have conducted a careful investigation and one of the sport reporters of this newspaper tracked a live football coach to his lair and saw and heard him in action. We regret that we have not permission to publish either the name of the coach or the enterprising journalist but we assure you that the conversation is quite authentic. Here is a real coach's chatter at half time:

"Of all the weedy football players I've ever seen you guys are they. Every time you birds climb into a football suit you get a rush of bone to the head—why, why, you've only made one gain of more than five yards and that was when some ninny ran twenty yards towards his own goal. Now listen, you birds, I know it's useless to attempt to appeal to your mental equipment because most of you don't know what it's all about but try and get this. If you drop this scrap today which you are going to do unless some of their men get knocked down and kicked in the teeth, I get fired and here it is with winter coming on and the ball and chain squawkin' for a fur coat and baby only half paid for and we gotta eat once in a while. Gimmie a break. Now there's a lot I would like to say to you punks but I gotta keep some of my self respect and I don't think you'd understand me anyway. Get outa here now and be careful of the steps on your way down."

—J. P. C.

Science Prof. — What is a vacuum?

M. Burgie — I have it in my head but I can't say just what it is.



CONSOLATION!
What if you do get
"bumped" occasion-
ally!

You will find soothing
comfort and
consolation in the
wonderful flavour of
Turrets.

20
for
25c

TURRET
CIGARETTES

Mild and Fragrant

QUALITY
SUPERIOR TOBACCO CO.
OF CANADA LIMITED
GUARANTEED

*Save the valuable
"POKER HANDS"*

It is Amazing to Contemplate

Look back at the progress of Canada during the past 10 years. What will the next 10 bring?

Increased population, certainly. . . in all probability, increased wealth.

The man who establishes himself solidly in the interesting business of growing flowers and vegetables under glass will surely benefit from both.

We are actively in touch with growers, day-by-day, and can give you a very fair idea of the possibilities in this fertile field.

Lord & Burnham Co. Limited

Builders of Greenhouses and Makers of Boilers

MAIN SALES OFFICE: HARBOUR COMMISSION BLDG., TORONTO, ONT.
Eastern Sales Office: 920 Castle Bldg., Montreal, Que.
Head Office & Factory: St. Catharines, Ontario.

A Tower of Strength 1929

New Assurance Paid for	\$651,451,000
Total Assurance in Force	\$2,401,237,000
Surplus and Contingency Reserve	\$72,807,000
Assets	\$568,197,000
Average rate of interest earned on invested assets	7.02 per cent

SUN LIFE ASSURANCE

Company of Canada

HEAD OFFICE: MONTREAL